Mr. Dan Buck
Indiana Department of Transportation
100 North Senate Avenue, Room N755
Indianapolis, Indiana 46204

Re: Registered Operation Status, 089-13760-00257

Dear Mr. Buck:

The application from Indiana Department of Transportation, received by IDEM, on December 5, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following quality assurance laboratory, located at 3930 179th Street, Hammond, Indiana, is classified as registered:

(a) Asphalt Extraction Process, with a maximum design rate of 0.89 extractions per hour; VOC's are emitted, without controls, from the solvent used for the extractions.

(b) Coarse and Fine Aggregate Testing with a maximum design rate of four samples per hour; particulates are emitted, without controls, from the shaking of the samples.

(c) Three (3) Space Heating Furnaces with a maximum heat capacity of 0.12 mmBtu/hr, combined. These units burn natural gas only and have uncontrolled emissions.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

   Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

2. Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the coarse and fine aggregate testing process shall be limited to 0.391 lb/hr, based on the applicant's submittal of sixty (60) lb/hr process rate.

   Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

   $E = 4.10\ P^{0.67}$

   Where E = rate of emissions in pounds per hour, and
   P = process weight rate in tons per hour

3. Pursuant to 326 IAC 8 (VOC Rule) the total VOC usage shall be less than ten (10) tons per year.

This registration is the first renewal of the existing registration for this source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Hammond Department of Environmental Management and the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

Hammond Department of Environmental Management
Air Pollution Control Division
5925 Calumet Avenue
Room 304
Hammond Indiana 46324

and

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with Hammond Air Quality Control Ordinance 3522 (as amended) to the Hammond Department of Environmental Management (HDEM) and in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Ronald Novak, Director
Hammond Department of Environmental Management

KMM

cc: Permits Administration – Mindy Hahn
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) or 326 IAC 2-5.5-4(a)(3)

Company Name: Indiana Department of Transportation – Hammond QA Laboratory
Address: 3930 179th Street
City: Hammond, Indiana
Authorized individual:
Phone #:
Registration #: 089-13760-00257

I hereby certify that INDOT's Quality Assurance Laboratory is still in operation and is in compliance with the requirements of Registration 089-13760-00257.

Name (typed):
Title:
Signature:
Date:

Hammond Department of Environmental Management (HDEM)
- Air Pollution Control Division -
and
Indiana Department of Environmental Management (IDEM)
Office of Air Management

Technical Support Document (TSD) for Registered Emission Unit(s)

Source Background and Description

Source Name:	Indiana Department of Transportation (Quality Assurance Lab)
Source Location:	3930 179th Street, Hammond, Indiana
County:	LAKE
Registration No.:	089-13760-00257
SIC Code:	1611 – Highway and Street Construction
Permit Reviewer:	Kristina Massey

The Hammond Department of Environmental Management (HDEM) has reviewed an application from INDOT relating to the renewal of their State Registration letter consisting of the following equipment:

(a) Asphalt Extraction Process, with a maximum design rate of 0.89 extractions per hour; VOC's are emitted, without controls, from the solvent used for the extractions.
(b) Coarse and Fine Aggregate Testing with a maximum design rate of four samples per hour; particulates are emitted, without controls, from the shaking of the samples.
(c) Three (3) Space Heating Furnaces with a maximum heat capacity of 0.12 mmBtu/hr, combined. These units burn natural gas only and have uncontrolled emissions.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) OP 01904 issued on February 1, 2001: and

(b) R089-5735-00257 issued on May 16, 1996.

Recommendation

The staff recommends to the Director that the renewal of the registration be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, used in this review was derived from the application and additional information submitted by the applicant.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations, three (3) pages.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	4.9119
PM-10	4.9119
SO_2	0.0003
VOC	6.1778
CO	0.0110
NO_x	0.0526

The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM_{10} are less than one hundred (100) tons per year in Lake County. Therefore, the source is **not** subject to the provisions of 326 IAC 2-7. The potential to emit is less than twenty five (25) tons per year and greater than five (5) tons per year of PM_{10}, therefore, a registration is required.

County Attainment Status

The source is located in Lake County.

Pollutant	Status
PM-10	Moderate non-attainment
SO_2	Primary non-attainment
NO_2	Attainment
Ozone	Severe non-attainment
CO	Attainment
Lead	Attainment

Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Lake County has been designated as severe non-attainment for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Emission Offset, 326 IAC 2-3.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year, and VOC, in Lake County, less than 25 tons,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the HDEM.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this facility.

There are no National Emissions Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 63 applicable to this facility.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This facility is not subject to 326 IAC 2-6 (Emission Reporting), because the source emits less than 10 tons/yr of VOC. However, pursuant to Hammond Air Quality Control Ordinance 3522 (as amended), the Company shall annually submit emission inventory statements for the purpose of source classification.

326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

326 IAC 8 (VOC Rule)

This facility is not subject to 326 IAC 8 (VOC Rule), because the source emits less than 10 tons/year of VOC. Pursuant to the Local Operation Permit 01904 and the Registration, the Company submits VOC usage and the Annual Notification to confirm compliance to this rule.

326 IAC 6-3-2 (Process Operations)

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the coarse and fine aggregate testing process shall be limited to 0.391 lb/hr.

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by the use of the equation:

$E = 4.10\ P^{0.67}$ Where E = rate of emissions in pounds per hour, and P = process weight rate in tons per hour

P = 0.03 Tons per hour

E = 4.10 X (P^0.67)
E = 4.10 X(0.03^0.67) = 0.0.391 pounds/hour

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of these listed air toxics are emitted from this registered source.

Conclusion

The renewal of this registration for the quality assurance laboratory at INDOT will be subject to the conditions of the attached proposed **Registration No. 089-13760-00257, Plt ID No. 089-00257.**

ALABAMA POWER LAW (CDS)/EIS CALCULATIONS

Indiana Department of Transportation (INDOT)
3930 179th Street
Hammond, Indiana 46320

PLANT ID NO: N/A
INSP DATE: N/A
CALC DATE: 3/12/01

CALCULATIONS BY: Kristina Massey

YEAR OF DATA: **2000**

NO. OF POINTS: 1
NO. OF SEGMENTS: 3

NOTES
EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

****

Hammond QA Laboratory
Asphalt Extraction

MDR (extractions/hr): 0.886635945
YEARLY PROD (extractions/yr): 17

STACK ID (DIAM:HEIGHT): Stacks 1 & 2
FLOWRATE (ACFM): 2260
Ts(°F): 70

PERMITTED OPERATING HRS: **8760** hr/yr

CNTRL DEV: None
(See Below)

			POTENTIAL EMISSIONS							**COMPANY AC**	
			BEFORE CONTROLS			AFTER CONTROLS				BEFORE	AFTER
POLLUTANT	EF(LB/extraction)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)		CONTROLS	CONTROLS
PM	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	0.0000		0.0000	0.0000
PM10	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	0.0000		0.0000	0.0000
SOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A		0.0000	0.0000
NOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A		0.0000	0.0000
VOC	1.59	0	1.4098	33.8340	**6.1747**	1.4098	6.1747	N/A		0.0135	0.0135
CO	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A		0.0000	0.0000
LEAD	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A		0.0000	0.0000

Solvent Used: Solvent Blend (EC-0578)
Maximum number of extractions per year = 1443; during 217 days; 7.5 hr/day
The highest solvent loss in one extraction was 700 ml.
2% of Waste Solvent may be asphalt.
Thus, the volume of VOC emissions maximum for a given extraction = Volume of clean solvent - (volume of waste solvent x 0.98)
= 7800 ml - (7100 ml x 0.98) = 842 ml VOC emissions / extraction (1.59 lbs/extraction)vent - (volume of waste solvent x 0.98)

	Height	Dimensions	Temp (°F)	Flow (ACFM)
Stack 1	26	1.67' x 1.67'	Ambient	1130
Stack 2	26	1.67' x 1.67'	Ambient	1130

Hammond QA Laboratory MDR (samples/hr): 4 STACK ID (DIAM:HEIGHT): Vent 1 (1.33' x 1.33')
Coarse and Fine Aggregate Testing YEARLY PROD (samples/yr): 414 FLOWRATE (ACFM): 1000
CNTRL DEV: None Ts(°F): 70

PERMITTED OPERATING HRS: **8760** hr/yr

(See Below)			POTENTIAL EMISSIONS						COMPANY ACTUAL	
			BEFORE CONTROLS			AFTER CONTROLS			BEFORE	AFTER
POLLUTANT	EF(LB/sample)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	CONTROLS	CONTROLS
PM	0.28	0	1.1200	26.8800	**4.9056**	1.1200	4.9056	0.1307	0.0580	0.0580
PM10	0.28	0	1.1200	26.8800	**4.9056**	1.1200	4.9056	0.1307	0.0580	0.0580
SOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
NOx	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
VOC	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
CO	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000
LEAD	0	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000

Worst Case: Cement Sampling
Mass balance using cement generated 0.28 lbs of cement dust for a 15 minute period.
Maximum is 2 runs per day; 208 days/yr.
Emissions = (0.28 lbs/15 min) x (60 min/hr) = 1.12 lbs/hr per operation

Aggregate Samples are approx. 15 lbs (8000 g) each which takes about 15 minutes to shake.
Sand samples are approx. 5 lbs each which takes about 5 minutes.

Hammond QA Laboratory MDC (mmBtu/hr): 0.12 HEAT CONTENT (Btu/cft): 1,000 STACK ID (DIAM:HEIGHT): (1.17: 30)
Three (3) Space Heating Furnaces MDR (mmcft/hr): 0.00012 QTY BURNED (mmcft/yr): 0.78 FLOWRATE (ACFM): ?
CNTRL DEV: None Ts(°F): 200

PERMITTED OPERATING HRS: **8760** hr/yr

(AP-42, Table 1.4-1, 2, & 3)			POTENTIAL EMISSIONS						COMPANY ACTUAL	
SCC NO. 1-03-006-03			BEFORE CONTROLS			AFTER CONTROLS			BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	CONTROLS	CONTROLS
PM	12	0	0.0014	0.0346	**0.0063**	0.0014	0.0063	#VALUE!	0.0047	0.0047
PM10	12	0	0.0014	0.0346	**0.0063**	0.0014	0.0063	#VALUE!	0.0047	0.0047
SOx	0.6	0	0.0001	0.0017	**0.0003**	0.0001	0.0003	N/A	0.0002	0.0002
NOx	100	0	0.0120	0.2880	**0.0526**	0.0120	0.0526	N/A	0.0390	0.0390
VOC	5.8	0	0.0007	0.0167	**0.0030**	0.0007	0.0030	N/A	0.0023	0.0023
CO	21	0	0.0025	0.0605	**0.0110**	0.0025	0.0110	N/A	0.0082	0.0082
LEAD	---	0	#VALUE!	#VALUE!	**#VALUE!**	#VALUE!	#VALUE!	N/A	#VALUE!	#VALUE!

(1) 60,000 Btu/hr
(2) 30,000 Btu/hr
(3) 30,000 Btu/hr

Total: Hammond Lab

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	1.1214	26.9146	4.9119	1.1214	4.9119	#VALUE!	0.397	1.740	0.0626	0.0626
PM10	1.1214	26.9146	4.9119	1.1214	4.9119	#VALUE!	N/A	N/A	0.0626	0.0626
SOx	0.0001	0.0017	0.0003	0.0001	0.0003	#VALUE!	N/A	N/A	0.0002	0.0002
NOx	0.0120	0.2880	0.0526	0.0120	0.0526	#VALUE!	N/A	N/A	0.0390	0.0390
VOC	1.4104	33.8507	6.1778	1.4104	6.1778	#VALUE!	1.410	6.178	0.0158	0.0158
CO	0.0025	0.0605	0.0110	0.0025	0.0110	#VALUE!	N/A	N/A	0.0082	0.0082
LEAD	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	N/A	N/A	#VALUE!	#VALUE!

Hammond Air Quality Control Ordinance No. 3522 (as amended)

* This source is class "Registered" according to potential particulate and VOC emissions.

326 IAC 6-3-2 Emission Calculation

$E = 4.10\ P^{0.67}$

E = Rate of emissions in pounds per hour
P = Process weight rate in tons per year

at P = 0.03 tph (60 pounds/hour)

E = 0.391 lbs/hr